



The National Institute for Occupational Safety and Health (NIOSH)



Farm Youth Dies After Falling From And Being Run Over By Tractor in Minnesota

Minnesota FACE 00MN029

SUMMARY

An 18-year-old male farm youth (victim) died of injuries sustained after he fell from and was run over by a tractor. He was driving a four wheel drive tractor equipped with an enclosed cab on a public road. A large machine known as a digger was hooked to the tractor's drawbar. The victim was driving the tractor south on a public road approaching an intersection with an east/west road. Before reaching the intersection the tractor entered the ditch on the right (west) side of the road. It traveled into the ditch and then into a field adjacent to the ditch. The tractor traveled in a southerly direction until it reached the east/west road. It crossed the east/west road traveling south and entered the ditch on the south side of the road. After crossing the road the tractor began a gradual turn to the left (east) as it traveled through another vacant field. After traveling east about 650 feet, it turned to the north toward the road that it had previously crossed. Before it again crossed the east/west road, the victim fell from the tractor cab and was apparently run over by the left rear dual wheels and the digger. After the tractor again crossed the east/west road, it became stuck in a wet spot in the field. A passing motorist noticed the victim lying in the field. He placed a call to emergency personnel who arrived at the scene shortly after being notified. The victim was transported to a local hospital where he was pronounced dead on arrival at the hospital. During the investigation it was learned that approximately one year prior to the incident, the victim had been diagnosed with a seizure disorder that remained untreated. MN FACE investigators concluded that to reduce the likelihood of similar occurrences, the following guidelines should be followed:

- persons with medical conditions should not operate machines and equipment if their condition might prevent them from safely operating the machine or equipment; and
- operators of tractors that are equipped with a rollover protective structure and a seat belt should always use the seat belt while operating the tractor.

INTRODUCTION

On May 26, 2000, MN FACE investigators were notified of a farm work-related fatality that occurred on April 26, 2000. The county sheriff's department was contacted and a copy of their releasable information was obtained. Information obtained included a copy of their incident report, a detailed scale diagram and photographs of the incident site and the equipment involved. A site investigation was not conducted by a MN FACE investigator. During MN FACE investigations, incident information is obtained from a variety of sources such as law enforcement agencies, county coroners and medical examiners, employers, coworkers and family members.

INVESTIGATION

On the day of the incident, the 18 year old male victim drove a large four wheel drive tractor on a public road. The approximately 280-300 horsepower tractor was 6-8 years old and was equipped with dual wheels on both the front and rear axles. It was equipped with an enclosed cab however, it could not be determined from photographs of the tractor whether or not the cab was also a certified rollover protective structure. A large farm machine known as a digger was hooked to the tractor's drawbar. A digger is a machine with curved tines that is used to till soil and create a uniform seed bed for planting. The digger was built in three sections, a center section that was about 16 feet wide and two 12-14 foot wide sections. The digger's frame was hinged at the ends of the center section to enable the width of the digger to be reduced when it was towed on public roads. The two 12-14 foot wide sections were raised to near vertical positions at the time of the incident.

Tire tracks on the road indicated that the victim was driving the tractor south on a township road approaching an intersection with an east/west road. Approximately 350 feet before arriving at the intersection with the east/west road, the tractor traveled to the right (west) side of the road and began to enter the ditch. The tractor continued into the ditch on the west side of the road and then into a field adjacent to the ditch. The tractor and digger traveled through the ditch and struck a utility pole that supported overhead power lines and knocked it down. The tractor entered a vacant field adjacent to the ditch and traveled through the field in a southerly direction until it reached the east/west road. When it reached the ditch of the east/west road, another power line pole was struck and knocked down. It crossed the east/west road traveling south and entered the ditch on the south side of the road.

After crossing the road the tractor began a large gradual turn to the left as it traveled through another vacant farm field. The direction of travel of the tractor slowly changed from south to southeast and then to east. After travelling east about 650 feet, it gradually turned to the northeast and finally north toward the east/west road that it had previously crossed. Approximately 90 feet before it arrived at and again crossed the east/west road, the victim fell from the tractor cab. After falling from the tractor he was apparently run over by the left rear dual wheels and the digger being pulled by the tractor. After the tractor crossed the east/west road again, it traveled about 775 feet into another vacant field before it became stuck in a wet spot in the field.

A passing motorist noticed the downed power lines and the victim lying in the field. He placed a call to emergency personnel who arrived at the scene shortly after being notified. The victim was transported to a local hospital where he was pronounced dead on arrival at the hospital.

CAUSE OF DEATH

The cause of death listed on the death certificate was crush injury to skull and head.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Persons with medical conditions should not operate machines and equipment if their condition might prevent them from safely operating the machine or equipment.

Discussion: Operators of machines and equipment must be able to maintain complete and proper control at all times to ensure their safety and the safety of others. In this incident, the victim had been diagnosed with a seizure disorder that remained untreated for approximately one year. Because of this condition, it is believed that the victim suffered a seizure while driving the tractor and was unable to either maintain control of the tractor or stop the tractor after he was stricken. After losing control of the tractor, it proceeded on its own across several roads and through several fields before it became stuck in a wet spot in a farm field. Prior to the tractor stopping after it became stuck, the victim fell from the tractor and

was fatally injured when he was run over. Whenever workers have any type of medical condition that may interfere with the safe operation of machines and equipment, they should not operate such machines and equipment out of concern for their own safety and the safety of others.

Recommendation #2: Operators of tractors that are equipped with a rollover protective structure and a seat belt should always use the seat belt while operating the tractor.

Discussion: The tractor associated with this incident was only 6-8 years old and was equipped with an enclosed operator's cab. Based on the age of the tractor, the cab was a certified rollover protective structure (ROPS) and the tractor would have been equipped by the manufacturer with a seat belt. Although this incident did not involve a rollover, the victim was not wearing the seat belt since he fell from the tractor cab and was apparently run over by the left rear dual wheels and the digger being pulled by the tractor. A general safe work practice that should always be followed by operators of tractors equipped with ROPS and seatbelts is to wear the seat belt at all times. A seat belt keeps an operator in the zone of protection provided by a rollover protective structure during a rollover and prevents an operator from falling or being thrown from the tractor if the operator loses control of the tractor for any reason. In this case, if the victim had been wearing the seat belt, he would have remained inside the cab until it became stuck in the wet field and this fatality might have been prevented.

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